ODP-81-609

18 MAY 1981

MEMORANDUM FOR: Executive Committee Members

VIA   :   Deputy Director for Administration

FROM   :   Bruce T. Johnson
                      Director of Data Processing

SUBJECT   :   FY 1981 Report on ADP in the CIA   ☐   25X1

REFERENCE   :   Memorandum to DDCI from D/ODP dtd.
                      16 May 1980, Subject: Fiscal Year 1980
                      Review of Automatic Data Processing (ADP)
                      Projects (Exec. Registry 9037-80/2)

Summary: This memorandum is a substitute for
the annual EXCOM briefing on ADP in CIA. It
concentrates on the services provided by the
Office of Data Processing (ODP) and concludes
that ODP's existing and planned capabilities
are basically adequate to meet the foreseeable
central computer service requirements of
CIA. Some new investments to ensure
reliability and availability will be
necessary, and an increase in applications
development manpower seems called for. ☐   25X1

1.   Introduction: In 1977 the management of CIA's ADP
resources was studied by the Executive Advisory Group (EAG), the
forerunner of today's Executive Committee. Out of those studies
developed the practice, beginning in 1978, of having the Director
of Data Processing present a "State of ODP" briefing to the
Committee, followed by reports from user components on major ADP
activities, which were expected to cost $250,000 in the current
fiscal year for ongoing projects, or that same amount over three
25X1   years for new initiatives. ☐

2.   In fiscal years 1978, 1979, and 1980, late in the first
quarter or early in the second quarter, the EXCOM devoted several
meetings to the review of ADP, beginning each time with an ODP

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overview based upon data collection by ODP from major users of ADP. Following each annual review, a guidance memorandum was issued, validating the proposed use of ADP resources and establishing limits on the growth of individual projects. Subsequently, if rates of consumption of these resources increased enough to cause a project to exceed its authorized limit by more than 10%, the component was required to notify the Comptroller and submit a justification for the increase. After the 1980 review, at the request of the DDCI, a summary of the results of the review was prepared (see reference). ☐   25X1

3. Subsequent to the 1980 review the Information Handling Task Force completed its work and, as a result of one of its recommendations, the position of Information Handling Systems Architect was established. In approving a tentative charter for the Architect, the EXCOM included the responsibility to report on the "state of Information Handling to EXCOM," adding parenthetically "(incorporates ADP review)." ☐   25X1

4. As FY 1981 began, ODP once more collected the data needed for its part of the annual review, although the timing and nature of the review were uncertain, given the arrival on the scene of the new Architect and the interruption in the routine work of the EXCOM and its staff caused by the transition to new Agency management. Discussions involving the EXCOM staff, the Architect, and ODP led to the decision to submit a brief summary report as a substitute for the briefings previously provided. 25X1 That report follows. ☐

5. Agency ADP Budget: Attachment A represents the Agency ADP budget for fiscal years 1980, 1981, and 1982, by Directorate, with separate entries for SAFE, NPIC and ODP, which together account for 84% of the 1981 total. In FY 1981 the Agency ADP budget increased 18% over FY 1980, rising from ☐   25X1 principally due to the scheduled rise in the SAFE funding profile, although imagery-related budgets also rose and of course inflation played its part. It is estimated that in this fiscal year Agency staff personnel will devote ☐ to   25X1 ADP-related activities, with the DDA accounting for 61% of the effort. The ADP budget for FY 1982 is 35% larger than FY 1981, the increase attributable to the upgrade of the NPIC Data System 25X1 (approximately ☐ and CAMS 2 25X1 ☐ plus a few smaller projects like 4C and, of course, 25X1 inflation. ☐
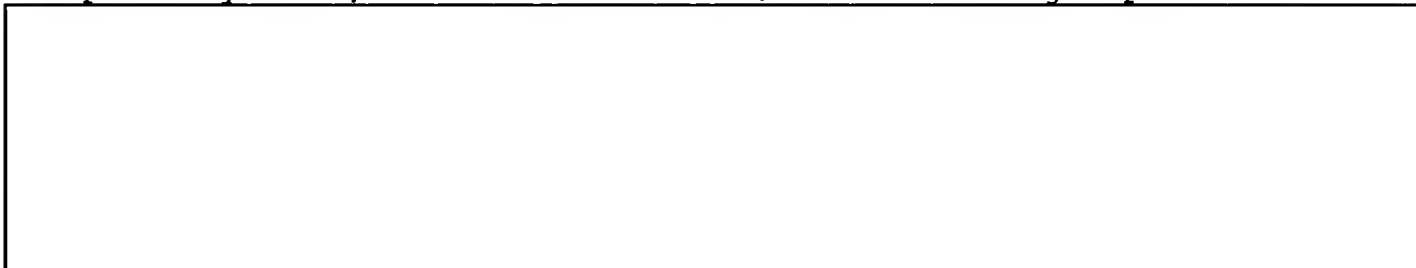
6. Consumption of ODP Resources in FY 1980: Each month ODP provides its customer components with a Project Activity Report (PAR) which shows how much of ODP's resources were consumed by

each of the component's ADP projects. The pricing system is
designed to permit nominal "recovery" of the entire ODP budget.
The primary charges, accounting for about 65% of the total, are
for the use of central processing services. The other charges
included direct contract costs (15%), application software
development and maintenance (12%) and dedicated support such as
computer systems, terminals and direct access storage space

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7. <u>ODP Supported Major Projects by Directorate:</u> ODP
supported 17 major ADP projects in FY 1981. Attachment B shows
the level of investment in these projects by Directorate, and the
percentage of increases expected in their use of ODP's major
services, Batch, Interactive (VM), and Database (GIMS).
Attachment C lists each of these 17 major ADP projects, which
range from 1 to 18% of the ODP budget and together consume 57% of
that budget. (We also received reports on 17 other projects
which did not meet the $250K threshold requirement but which were
significant enough to include in the annual review. The projects
in this second category account for an additional 6% of ODP's
25X1   resources.)

8. <u>Major Component-Budgeted ADP Initiatives:</u> Attachment D
provides directorate-level summary information for FY 1981 and
1982 on 14 component-budgeted ADP initiatives, and Attachment E
identifies the individual projects. Although primarily funded by
the customer component, many of these projects entail some level
of ODP support, as shown in the tables. Most of these projects
will continue into FY 1983, and resources to support them have
been included in the Program Plans submitted by the sponsoring
components. (Because SAFE is the subject of separate review by
its Steering Committee and the Directors of DIA and CIA, it has
been excluded from previous EXCOM reviews, and its budget has not
been included in Attachments D or E. The ODP budget for the
support of SAFE development is included in Attachment C,
25X1   however.)

9. <u>Review of Major Projects:</u> Our review of the data on
these major projects reveals several issues worth highlighting.

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a. Community-related Activities. The COMIREX
Automated Management System (CAMS) continues
to be the largest of the ODP-supported
projects.   Total cost of services represents
[   ] of the ODP budget. More significant,
however, is the continuing CAMS requirement
for [   ] of the staff employees in the
applications component of ODP [   ] of the
total applications staff when one counts
contractor personnel).

b. Interface to Central Data Banks. Several
component-budgeted projects involve
minicomputer-based systems for specialized
processing needs. Interfaces to central ODP
files are required for access to pertinent
data. This relatively new requirement for
delivery of large amounts of data in
electrical form to remote processing sites
further heightens our already growing concern
over the availability and reliability of data
processing and communications facilities to
support the rapidly increasing number of users
who require frequent and immediate access to
their data. New investments will have to be
made to ensure that our network of computer
and communication systems operate with the
necessary availability and reliability to
guarantee the continuing delivery of critical
services to our end users.

c. Terminal Availability. The tight limits
imposed on ODP for new terminal acquisitions
continue to provide a constraint on the growth
of project activity. Budgetary restrictions
have hampered our ability to provide anything
beyond the minimum level program requirements
of our end users. By FY 1983, we will only be
able to fund 77% of our user's minimum level
requirements and less than 25% of their
overall requirements. At least two
directorates (DDO and NFAC) are planning to
fund their most critical requirements that
cannot be supported by ODP.

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d. Applications Development Resources. The
    success of certain projects reviewed is very
    much dependent upon the availability of
    adequate program development resources.
    Because of the increasing maintenance burden
    we have had to bear as new systems are added
    to the existing base of developed production
    systems, the present share of ODP resources
    available for new applications development has
    been shrinking drastically at the same time
    that the requirement for new application
    development from virtually all parts of the
    Agency has reached an unprecedented level (the
    backlog exceeds 50 workyears). Although our
    Program Plan for FY 1983 contains 35
    additional staff positions to help meet this
    need, our problems are more immediate. The
    schedules for several of the ODP-supported
    projects (in particular, PAYROLL) are in
    jeopardy as a result. ☐

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10. ODP Workload Trends: The major projects provide a basis
for projecting only part of the demand for ODP's services. The
trend lines for services to all projects, large and small, are
all rising. We measure these trends for Batch Service (average
prime-time as well as average peak 24-hour workload), Interactive
(VM) Services, Database Management Services (GIMS), DDO Services
and CAMS Service.

a. Batch: ` Still the most economical way to meet
    the needs of a large number of users, Batch
    continues to grow at the rate of 10 to 15%
    annually. To avoid driving customers to the
    use of more expensive on-line service, we size
    our Batch capability to provide reasonable
    prime-time turnaround, with assurance of
    24-hour turnaround capacity for lower priority
    work. When any other service is forced into
    its backup configuration, Batch is usually the
    first to be reduced, but because it can be
    divided among several CPU's the impact on
    users can be cushioned. Batch capacity is
    effectively augmented whenever other demands
    cause us to expand our total computing power,
    and plans for other services ensure adequate
    capacity here.

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b. Interactive: VM service, upgraded in FY 1980
    to an Amdahl V8, continues to grow and a
    larger IBM 3033 multiprocessor (MP) was
    installed in March 1981. Currently, there are
    [   ] users and the issuance of passwords for
    new users continues to increase steadily. In
    1983 we project a workload which will exceed
    the capacity of the IBM 3033 MP. Future
    expansion will require ODP to examine
    alternative means of providing support to VM
    users. The DO already has a copy of the VM
    system available in the Special Center which
    affords protection of their data.

c. Database Management Systems: The Generalized
    Information Management System (GIMS) is used
    to provide central Database Management System
    (DBMS) services. Currently, there are some 35
    distinct databases on the single GIMS CPU,
    with 18 more scheduled for implementation in
    FY 1981. Small increases in CPU power are
    projected in FY 1981 and FY 1982 to meet a 29%
    rate of increase in demand. This service is
    also available as a separate service in the
    Special Center.

d. DDO Services: The Directorate of Operations
    has provided ODP with a comprehensive set of
    near- and long-term requirements. The most
    significant of these, in terms of their impact
    on ODP's computer systems plans, include (1)
    the DDO's requirement for compartmented VM and
    GIMS services, and (2) its requirement for a
    single system capable of running all of its
    critical on-line applications. This second
    requirement is to enable effective operation
    of these applications even when the DO second
    machine has been preempted to backup CAMS
    service. Plans to meet these requirements
    call for upgrading one of the two DDO machines
    in FY 1981 and the other in FY 1982. Both of
    these upgrades will be accomplished by moving
    larger CPU's from the Ruffing Computer Center
    to the Special Center.

e. CAMS: The COMIREX Automated Management System
    (CAMS) will grow because of its direct support
    to overhead reconnaissance programs. The

current CAMS system is expected to satisfy
user requirements until 1984 when major new
collection systems come onstream. A follow on
system, CAMS 2, will then be required. A
large CPU will be obtained for development of
this new system and will then become the
production system for CAMS 2 and also support
graphics capabilities using minicomputers as

25X1   interfaces. ☐

11. ODP Plans and Investments: The major thrust of ODP
planning and investment through FY 1983 is focused on ensuring
that Batch, Interactive (VM), Database, DDO services, and CAMS
have the necessary capacity, responsiveness, and availability to
meet growing Agency needs.

   a. FY 1981: Two of our basic services will
      require upgrading in FY 1981 to meet increased
      workloads. The IBM 3033 MP system was
      installed to meet the need for more capacity
      on our VM interactive system. This service
      had reached saturation with ☐ simultaneous
      users online. The multiprocessor will allow
      us to handle over ☐ simultaneous users with
      satisfactory response time. An existing
      Amdahl V6 will be freed from its present use
      to replace the computer system supporting
      critical DDO services. Because of the use of
      the same hardware architecture for all ODP
      general services, it is possible to upgrade
      multiple services with the procurement of a
      single new computer system. More capacity
      will be provided as a result to handle the 18
      new GIMS applications planned for FY 1981.

   b. FY 1982: In FY 1982 a new computer system
      will be installed to meet the planned growth
      in batch processing requirements. This
      acquisition will allow us to also upgrade the
      backup capability for both DDO services and
      CAMS needs. A second computer will be
      installed for the development needs of the
      CAMS 2 project. A modest upgrade in database
      services will also be provided. In order to
      meet the continuously growing requirement for
      online storage, we will embark on a major

25X1 (left margin, two positions)

25X1 (right margin)

upgrade of our DASD (Direct Access Storage Devices) capacity starting in FY 1982 when technologically superior DASD will be available at substantially lower cost than current technology.

c. <u>FY 1983:</u> Our planning for FY 1983 includes one new processor to meet the estimated interactive workload of over ☐ simultaneous users on the VM system. Other than VM, no additional processing upgrades are anticipated in FY 1983. In the absence of any new requirement, the FY 1982 upgrades will be adequate to support our other major services through the end of FY 1983.

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d. <u>FY 1984 and Beyond:</u> Our plans for FY 1984 and beyond call for annual upgrades to meet projected workload demands for computer services. We will continue to reallocate to other needs equipment that is replaced as a result of upgrading one service, in line with our policy of effecting improvements in multiple services from the procurement of a single new processor. The adequacy of central computer service can thus be guaranteed provided that the ODP budget base is protected from the impact of inflation. ☐

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12. <u>Conclusion:</u> Although there are outstanding issues in the areas of applications development, terminal availability and system reliability, as noted in paragraph 9 above, it is apparent that ODP has or will have adequate central computing and data storage capacity to meet projected demand through FY 1982 and our Program Plan for FY 1983, if approved, will ensure that we continue to have the necessary computer power. In view of the fact that we are already well into the third quarter of this fiscal year, we recommend that we and the requesting components be authorized to continue with the major projects listed in the attachments at the level of investment requested, subject to change as a result of decisions on the 1983 Program. Until formal action is taken to change the reporting process, ODP will continue as in the past, alerting customers when overruns appear likely on ODP-supported activities, and assisting them to report the reasons for increased requirements to the Comptroller. ☐

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Bruce T. Johnson

Attachments: a/s

Next 7 Page(s) In Document Exempt

DD/A Reg. 80-1265
Exec. Reg. 9037-80/2

ODP 0-649
16 May 1980

MEMORANDUM FOR: Deputy Director of Central Intelligence

VIA: Deputy Director for Administration

FROM: Bruce T. Johnson
Director of Data Processing

SUBJECT: Fiscal Year 1980 Review of Automatic Data
Processing (ADP) Projects [ ] 25X1

REFERENCE: Your memorandum to EXCOM members, same
subject, dated 18 March 1980 (EXCOM 9037-80)

1. This memorandum responds to reference request
that I summarize the lessons learned during the EXCOM
review of ADP projects and that I solicit the views of
the EXCOM members on how the process could be improved
next year. Paragraph 7 contains several recommendations
25X1   for your consideration. [ ]

2. We can summarize the lessons learned in the
FY 1980 Review as follows:

    a. In its FY 80 review the EXCOM received ADP
       Project Decision Forms covering 29 ODP-supported
       projects and 11 component-budgeted projects repre-
       senting a total cost of [   ] of   25X1
       the [   ] identified in the FY 80 budget
25X1   as ADP money. (These figures exclude [   ]   25X1
       for Project SAFE, which is separately reviewed by
       its CIA/DIA Steering Committee.) Staff review
       of these summaries led to requests for briefings
       on ten of these projects (five ODP-supported and
       five other). The briefings, including the ODP
       overview, were presented in four meetings of the
       Committee and took a total of five hours, less
       than half the time consumed by the 1979 process.
       As a result of these reviews all on-going projects
       except accelerated CRAFT were approved at the
       FY 80 resource levels requested (see reference).
       Specific comments on individual projects are   25X1

unnecessary in this summary; details may be
found in the Project Decision Forms. (CRAFT
has subsequently been the subject of a separate
review.)

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b. The ODP-supported projects covered by the review
represent [   ] of the resources controlled by ODP.
From the overview of ODP presented by the Director
of Data Processing, the EXCOM learned that customer
dependence on and demand for all forms of computer
service (batch, database or GIMS, and interactive
or VM) continues to rise, and customer projections
of support needed for the activities under review
show that the growth curves for these services are
not likely to change significantly. Plans for
meeting this growing demand were outlined in general
terms. Technology is our ally in this supply/demand
struggle and it is believed that given the drop in
the unit cost of computing, the Office of Data
Processing will be able to keep ahead of demand
by judicious upgrading of its equipment to take
full advantage of technological developments. Such
upgrades in general purpose central ADP services
will be possible if ODP is able to maintain its
budget base at today's levels, adjusted for
inflation. [   ]

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c. One trend was apparent which could alter this
budgetary equilibrium. Community-related
activities are consuming an increasing proportion
of Agency ADP resources. The most dramatic
example is CAMS (COMIREX Automated Management
System), which has risen from 11% of ODP's budget
in 1978 to 20% in 1980. ODP has just been asked
to assume responsibility for the development of
CAMS II, to support tomorrow's imagery-support
needs. Cost estimates are in preparation, but the
additional resources needed for this effort will
further increase CAMS' percentage of ODP's budget.
An impending NFIB/IHC approval of a proposal to
make CIA's RECON bibliographic system available
to the Community has major resource implications
as well, but the proposal was contingent upon the
availability of non-CIA funding. RMS/IRO, which
is managing the review of the proposal, has indi-
cated that it will attempt to provide RMS funds
for this project. [   ]

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d. The growth of CAMS is but one element in the development of Imagery as the major consumer of ADP resources. Programmatic distribution of CIA's ADP budget in FY 1979 showed 25X1

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e. Comparable distributions of ODP's resources 25X1

f. Agency budgets show ☐ workyears attributed to 25X1 ADP, about half of them in ODP itself. No significant changes in these levels are projected for FY 1981. Trends in "do-it-yourself" computing 25X1 suggest that an increasing amount of time not identifiable as ADP-related is expended on the development and use of ADP programs, however. ☐

g. Overall, except for SAFE, the Agency ADP budget is in a steady state when 1979, 1980 and 1981 are compared. The $8 million rise in 1981 is almost totally attributable to SAFE, whose established funding profile shows an increase 25X1

h. Finally, this year's review showed that on balance the 1979 projections had been more accurate than those of the previous year. No unreviewed projects crossed the review threshold of $250,000 during FY 1979, although several of the reviewed projects exceeded their original requested resource levels. Fortunately, ODP was able to allocate non-prime-time batch service to meet the unanticipated demand. The situation was aided by the fact that, due to changes elsewhere in the programs, several large projects in ODSE and OWI consumed less than had been predicted. Overall, this monitoring aspect of the review process seems to be working well. ☐

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3. The comments of EXCOM members on the review process were generally supportive, and no one suggested that we forego the practice. Most suggested, directly or indirectly, that we attempt to reduce further the amount of time the members themselves spend on the review. Additional attention to critical policy, planning and organizational issues was urged. D/BFAC urged highlighting of Community-related projects. The Comptroller suggested a preview procedure to improve the focus of the briefings presented to the Committee, and additional emphasis on plans for forthcoming years. He also recommended deferring any changes in the process until the Information Handling Task Force has completed its work and reported to the EXCOM.

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4. The IH Task Force may indeed offer recommendations which would have a direct bearing upon the ADP review process. Any newly created central information handling structure, whether it be a small staff element or a major line organization, would have to play a part in any review of the uses of ADP. Furthermore, its involvement would probably change the nature of the review, for the communications and records management elements of information handling could hardly be divorced from any review managed or influenced by such an entity. This fact of the interrelationship of the several aspects of information handling leads to the fundamental question: Will it be appropriate, in the future, to conduct a review of ADP projects which does not also cover communications and other aspects of information management? Many of the 40 projects covered in the FY 1980 review are as dependent on effective communications as on responsive computers. Should we redirect our review to make it more comprehensive? But, if we do, how do we avoid making it so large and encompassing as to become totally unwieldy as a target for EXCOM attention?

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5. Related to this question of broader content is the matter of future versus current requirements. ODP has in recent weeks been supporting the Office of the Comptroller in its efforts to assess ADP-related requests (in this case for minicomputers) found in component programs for FY 1982. In many cases these future needs were not mentioned in the Project Decision Forms prepared for the FY 1980 review. The question arises: Should the ADP Review, however broadened in scope, give more emphasis to outyear requirements and provide advance information about the investments which will be proposed in the annual Program Plans?

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6. The answers to these questions may be provided, at least in part, by the IHTF study and the debate it stimulates. Meanwhile, it is clear that we have a concensus in the desirability of some form of periodic review of our use of ADP. If we are to have such a review in 1981, we will have to begin preparing the necessary forms and instructions by midsummer, when, in all probability, final decisions will not yet have been reached on the Task Force recommendations. The reconfirmation of existing monitoring procedures and thresholds contained in paragraph 2 of reference will ensure that we can obtain the basic data needed for a 1981 review. One minor addition to those standing instructions might be useful, given our 1979 experience. If ODP could be advised of significant reductions (-20% or more) in expected current-year use of ODP services, we could plan more effectively for the reallocation of the unused capacity to meet unanticipated growth in use by other customers. ☐

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7. The foregoing leads to the following recommendations:

a. Amend reference to require components to report major reductions (20% or more) in expected ADP usage rates for reportable ADP projects during the remainder of FY 1980.
(Action: EXCOM Staff in coordination with ODP) ☐

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b. Request the Information Handling Task Force to address the review process as a part of their final report on their study of information handling in CIA. Any proposals on this subject should seek to reduce further the time investment of EXCOM members and should reflect increased emphasis on issues and future resource needs.
(Action: IHTF) ☐

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c. Defer any other changes in the ADP review and reporting process until after the Task Force Report is available. ☐

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/s/ Bruce T. Johnson

Bruce T. Johnson

SUBJECT: Fiscal Year 1980 Review of Automatic Data
          Processing (ADP) Projects ☐

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CONCUR:

DON WORTMAN   23 MAY 1980
_____   _____
Deputy Director for Administration   Date

APPROVED:

Recommendation 7a is approved ( ) disapproved ( )
Recommendation 7b is approved ( ) disapproved ( )
Recommendation 7c is approved ( ) disapproved ( )

        /S/
_____   27 May 1980
Deputy Director for Central Intelligence   _____
                                                         Date

EXCOM 9037-80 | ODP #

18 March 1980

ODP # *C-335*

MEMORANDUM FOR: Executive Committee Members

FROM : Deputy Director of Central Intelligence

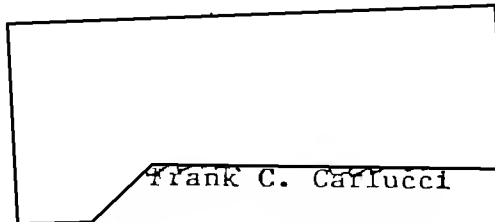SUBJECT : Fiscal Year 1980 Review of Automatic Data
Processing (ADP) Projects (U)

REFERENCE : Memo to Executive Committee Members from DDCI,
dated 23 May 1979, Subject: Fiscal Year 1979
Review of Automatic Data Processing

1. With the exception of the DDO accelerated CRAFT system, all
operating FY-1980 ADP projects reviewed by the Executive Committee
and currently budgeted are approved at the resource level requested.
A decision on the CRAFT project will be made after examining the
findings of the Comptroller's review of the accelerated CRAFT
system proposal. Unfunded projects are approved subject to Comptroller
approval of reprogramming o. funding requests. (AIUO)

2. Procedures for monitoring current year ADP costs and reviewing
changes in requirements will remain the same as those outlined in the
referenced memorandum with one exception: If costs of component-
budgeted ADP projects are projected at any point in the fiscal year
to exceed the initial authorizations beyond the reprogramming
authority of the Deputy Directors, components will request prior
Comptroller approval. (U)

3. In keeping with the procedures established in the referenced
memo, the Committee will incorporate a review of major ADP capital
investments in the 1982 program plan during our review of the
program. (U)

4. To complete this year's ADP review, I would like the Director
of ODP to summarize the lessons learned during this process and to
solicit your views on how the process could be improved next year. (U)

Frank C. Carlucci

STAT

cc: D/ODP

ROUTING AND RECORD SHEET

SUBJECT: (Optional)

FY 1981 Report on ADP in the CIA (U)

FROM: D/ODP/DDA 2-D-00 HQS.		EXTENSION	NO. *ODP 81-609*
STAT			DATE **1 5 MAY 1981**

TO: (Officer designation, room number, and building)	DATE RECEIVED	DATE FORWARDED	OFFICER'S INITIALS	COMMENTS (Number each comment to show from whom to whom. Draw a line across column after each comment.)
1. EO/DDA BX-4	15 MAY 1981			Bill/Harry The attached report on ADP, a substitute for the briefing normally given earlier in the year, has been requested by Bob Gates with a Monday a.m. deadline (5/18/81). We have been seeking last minute con- firmation of the 1982 data on component-budgeted projects (Attachments D and E) so the details in those tables may be subject to change late today or early Monday. The changes will not affect the message in the memo, however. Please review and return to me for reproduction in enough copies for Excom and for any late changes in D and E. If you want any changes made in the memo, we can take care of them over the weekend in order to meet the deadline. Sorry for the rush. (I'm off to
2. ADDA	5-15			
3. DDA				
4.				
5.				
6.				
7.				
8. D/ODP				
9.				
10.				
11.				_____ demo STAT so haven't signed the memo. Will do before it is reproduced.)
12.				
13.				STAT
14.				Bruce T. Johnson
15.				Att.

FORM 610 USE PREVIOUS EDITIONS
1-79